



# *Funding Innovation for Critical National Needs*

## **TECHNOLOGY INNOVATION PROGRAM**

The Technology Innovation Program<sup>1</sup> (TIP) at the National Institute of Standards and Technology was established to assist U.S. businesses and institutions of higher education or other organizations, such as national laboratories and nonprofit research institutions, to support, promote, and accelerate innovation in the U.S. through high-risk, high-reward research in areas of critical national need. These areas need government attention because the magnitude of the problem is large and societal challenges are not being sufficiently addressed.

### **Key Features of TIP**

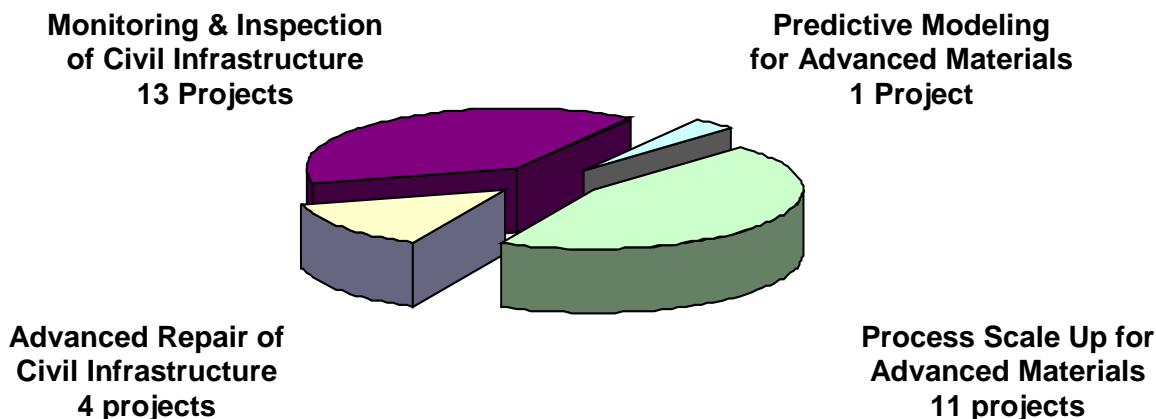
- **Novel Purpose:** address societal challenges not being addressed in areas of critical national need with benefits that extend significantly beyond proposers
- **Societal Challenges:** concentrate on those challenges that justify government attention
- **Scientific & Technical Merit:** support innovative high-risk, high-reward research
- **Transformational Results:** focus on ideas with a strong potential for advancing state-of-the-art and contributing to U.S. science and technology base
- **Rich Teaming:** fund small and medium sized businesses, academia, national labs, nonprofit research institutions and other organizations
- **Clear Government Need:** justifies government attention because the magnitude of the problem is large and no other sources of funding are reasonably available
- **Funding:** Single company projects up to \$3M over a maximum of three years  
Joint Venture projects up to \$9M over a maximum of five years  
Note: TIP funds direct project costs only
- **Cost share:** At least 50% of the yearly total project costs – direct plus indirect – and may be composed of both cash and in-kind

### **TIP's Competitions**

In June 2008, TIP published a white paper describing the scope of its first solicitation – “Advanced Sensing Technologies for the Infrastructure: Roads, Highways, Bridges and Water Systems.”<sup>2</sup> In March 2009, TIP's most recent competition, TIP held solicitations in two areas described in the white papers: “Accelerating the Incorporation of Materials Advances into Manufacturing Processes”<sup>3</sup> and “Advanced Sensing Technologies and Advanced Repair Materials for the Infrastructure: Water Systems, Dams, Levees, Bridges, Roads, and Highways”<sup>4</sup>.

TIP announced in January 2009 nine projects for award to address critical national needs in civil infrastructure, representing up to \$88.2 million in new research, \$42.5 million of it funded by TIP. In December 2009, TIP announced another 20 projects for award—twelve that address manufacturing and eight in civil infrastructure—representing up to \$146 million in new research with up to \$71 million in TIP funding. Awarded projects demonstrate TIP's commitment to multi-disciplinary approaches and to encouraging teaming arrangements. Seventy-three participants are involved in 29 projects. Seventeen of the 29 projects are joint ventures. TIP offers a unique opportunity for funding collaborative cutting edge research.

# TIP Awards 2008-2009



## Contribute to TIP

TIP seeks white papers to help shape the Program's collaborative outreach and future competitions. White papers in all areas of critical national need are encouraged. Beyond civil infrastructure, examples of other areas under evaluation include aspects of: complex networks and systems, energy, ensuring future water supply, manufacturing, robotics, nanotechnology, healthcare, and sustainability. White papers, along with the vision of the Administration, NIST, other government agencies, the technical communities, and other stakeholders, help TIP shape the scope of future competitions.

For detailed instructions on how to prepare and submit white papers please refer to "*A Guide for Preparing and Submitting White Papers on Areas of Critical National Need.*"<sup>5</sup>

## University Participation in TIP

TIP only provides funding through competitive processes. Universities may lead a joint venture when teamed up with at least one small or medium sized for-profit company or may participate as a member within a joint venture led by a small or medium sized company. Universities may also participate as a contractor within any TIP award. Title to intellectual property for single company awards is pursuant to the Bayh-Dole Act, and for joint ventures may vest in any participant in the joint venture as agreed to by its members. See the TIP website for a full discussion of the eligibility and application requirements.

**To stay informed about future TIP competitions, join the TIP mailing list by visiting [www.nist.gov/tip](http://www.nist.gov/tip)**

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<sup>1</sup> <http://www.nist.gov/TIP>

<sup>2</sup> [http://www.nist.gov/tip/cnn\\_white\\_paperfinal.pdf](http://www.nist.gov/tip/cnn_white_paperfinal.pdf)

<sup>3</sup> [http://www.nist.gov/tip/comp\\_09/white\\_papers/manuf\\_wp\\_032009.pdf](http://www.nist.gov/tip/comp_09/white_papers/manuf_wp_032009.pdf).

<sup>4</sup> [http://www.nist.gov/tip/comp\\_09/white\\_papers/ci\\_wp\\_031909.pdf](http://www.nist.gov/tip/comp_09/white_papers/ci_wp_031909.pdf).

<sup>5</sup> [http://www.nist.gov/tip/guide\\_for\\_white\\_papers.pdf](http://www.nist.gov/tip/guide_for_white_papers.pdf)